REMARKS

In response to the above-identified Final Office Action ("Action"), Applicants submit the following remarks and seek reconsideration thereof. Claims 1-20 are pending in the present application. Claims 1-20 are rejected. In this response, claims 1, 9 and 20 are amended, no claims are cancelled and no claims are added.

Applicant has amended claims 1, 9 and 20 in response to the final office action. Claim 20 is amended merely to rectify typographic errors.

The Examiner has rejected claims 1 and 9, for failing to comply with the enablement requirement. This has arisen due to an error in the response to office action filed on 08 May 2006. Applicants are grateful to the Examiner for bringing this to their attention. The correct wording – "wherein the GPS signal samples contain an intermediate frequency (IF) signal" – now corresponds with the description at paragraph 10 of the application as filed. Further amendments have been made to claims 1 and 9 in order to more clearly define the invention.

The Examiner also rejects all claims as obvious after Guillard (US 6,114,975) in view of Green (US 6,667,713). Applicants disagree.

Guillard was cited in the first office action. Guillard describes a system in which a moving target (such as an aircraft carrier) transmits GPS pseudo-range data to an approaching aircraft. The aircraft is then able to compare the target pseudo-range data with its own pseudo-range data to compute a differential position estimate with respect to the target.

Green describes the addition of a conventional GPS receiver to a GPS satellite, thereby enabling self-monitoring by the satellite.

The invention of the present application is a receiver which outputs GPS intermediate frequency (IF) signal samples together with ancillary information. The ancillary information describes characteristics of the GPS signal samples and/or the GPS signals which relate to the GPS receiver. This enables an arbitrary pairing between any GPS signal processing software and any receiver, since the ancillary information allows the software to adapt to the characteristics of the receiver output.

Neither Guillard nor Green discloses a receiver as recited in claim 1, outputting GPS signal samples containing IF signals which remain modulated. As with most conventional GPS receivers, IF signal samples are generated internally in the receivers of Guillard and Green, but they are not output.

The Examiner equates the GPS receiver of claim 1 with the GPS receiver associated with the target in Guillard. However, Guillard makes quite clear at col. 7, lines 15-20 that this receiver outputs "only raw measurements of distances" together with "identification of the satellites which it uses". The receiver therefore does not output GPS signal samples and does not output "ancillary information" which describes characteristics of the GPS signal samples and/or the GPS signals which relate to the GPS receiver (thus allowing GPS signal processing software to adapt to characteristics of the GPS receiver). The receiver most certainly does not output both these items, as required by claim 1.

The Examiner goes on to suggest that Green teaches "a receiver circuit outputting IF signals". It does not. As in most conventional GPS receivers, the receiver (40) of Green has an RF front-end (44) which generates IF signal samples and a processor (46) which performs the necessary calculations on these samples. However, the receiver (40) does not output the IF signal samples contained within the GPS signal samples and/or GPS signals as required by claim 1.

The Examiner postulates that it would have been obvious to modify Guillard by incorporating the RF front-end of Green. Applicants can see no reason why a person of ordinary skill would ever be prompted to combine Green and Guillard; and indeed, the Examiner offers no suggestions in this regard. However, if the RF front-end of Green was combined with the teaching of Guillard, the result would be that the RF part of Guillard (comprised of elements 20, 30 and 40 in Figure 1) would be replaced by element 44 (the RF front-end) of Green's Figure 4. This provides no technical difference or advance beyond what is already taught by Guillard. In particular, the person of ordinary skill is no closer to building a receiver which outputs GPS signal samples together with ancillary information as specified in claim 1.

Furthermore, the teachings of Guillard, Green or their combination do not address the problem solved by the invention of claim 1 -- namely, that a software GPS system is enabled to work with any receiver, through the provision of ancillary information together with IF GPS

signal samples. Applicants submit that for at least the reasons given, the subject matter of claim 1 is not obvious.

The same arguments given above apply even more so in respect of claim 2, which explicitly recites output of the signal samples and ancillary information to an external device.

With respect to claims 3 to 7, although the Examiner has made broad assertions that Guillard discloses the various specific types of ancillary information recited in these claims, it has not been identified which elements disclosed by Guillard are supposed to correspond to the features of the claims. The information output by Guillard's receiver is described at col.7, lines 48-67 and consists of satellite number; satellite validity information; pseudo-distance; pseudo-velocity; time and "ancillary information". The ancillary information includes examples of heading, pitch and roll of the target (aircraft carrier). The applicant therefore fails to see how the ancillary information of Guillard includes "information relating to the type or identity of the GPS receiver", as recited in claim 3. The same applies to claims 4 to 7.

Regarding claim 8, the Examiner's assertion that Guillard discloses that the user is able to directly select one of a plurality of operating modes at col.11-12, lines 35 -5 is not understood. All that is described at col. 11-12, lines 35 -5 is related to something the user is able to directly do is mentioned at col. 11, lines 53-55 ("[t]he hunter makes direct use of the corrected measurements"). However, this has nothing to do with selecting one of a plurality of operating modes as called for in claim 8.

For claim 9, applicants repeat similar submissions to those above for claim 1: in short, there is no disclosure in Guillard of any device receiving GPS IF signal samples together with ancillary information describing characteristics of the GPS signal samples and/or the GPS signals which relate to the GPS receiver, allowing GPS signal processing software to adapt to characteristics of the GPS signal samples output by the receiver. Green does nothing to remedy the deficiencies of Guillard's disclosure. Therefore the subject matter of claim 9 cannot be rendered obvious by these documents.

Against claim 10, the Examiner has cited a generic description, in Guillard, of the GPS satellite positioning system. This does not have any reference to ancillary information, GPS IF

signal samples, or to the use of ancillary information in the de-spreading of the GPS spread spectrum signal as called for in claim 10.

For claim 11, the arguments above in relation to claim 2 apply. For claims 12 to 16, the arguments above in relation to claims 3 to 7 apply.

Claims 17-20 are novel and non-obvious by virtue of their dependency on claims 9 and 1, respectively.

CONCLUSION

In view of the foregoing, it is believed that all claims now pending, namely claims 1-20, are now in condition for allowance and such action is earnestly solicited at the earliest possible date. If there are any additional fees due in connection with the filing of this response, please charge those fees to our Deposit Account No. 02-2666. Questions regarding this matter should be directed to the undersigned at (310) 207-3800.

Respectfully submitted,

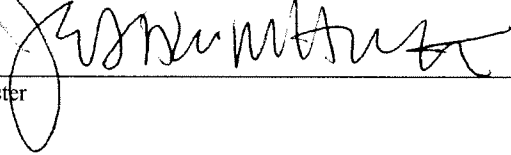BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: __August 7, 2008__   By: _____

Eric S. Hyman, Reg. No. 30,139

1279 Oakmead Parkway
Sunnyvale, CA 94085-4040
Telephone (408) 720-8300
Facsimile (408) 720-8383

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Jessica M. Huester